

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

Appl. No. 09/745,385

Reply to Final OA of February 10, 2004

RECEIVED  
CENTRAL FAX CENTER

JUL 12 2004

OFFICIAL

**AMENDMENTS TO THE CLAIMS**

Claims 1-37 were originally pending.

Please withdraw and cancel Claims 35-37 without prejudice as belonging to non-elected subject matter.

Please amend Claims 1-8, 10, 12, 16-18, 20-21, 24-26, and 31.

Kindly add Claims 38-46 are added.

Accordingly, claims 1-34 and 38-46 are currently pending.

The following listing of claims replaces all prior versions and listings of claims in the application.

Appl. No. 09/745,385

Reply to Final OA of February 10, 2004

**CLAIM LISTING**

1. (Presently amended) A method comprising:  
~~providing user interface information into firmware on a USB device, the~~  
~~user interface information corresponding to the USB device; and~~  
~~responsive to receiving, by a USB device, a host-specific device request~~  
~~from an application executing on a computing device coupled to the USB device;~~  
and  
identifying, by the USB device, a host-defined string descriptor defined by  
the application, the host-defined string descriptor being stored in firmware of the  
USB device.  
~~communicating the user interface information to a requestor.~~

2. (Presently amended) A method as recited in claim 1, wherein the  
~~host-defined string descriptor comprises user interface information comprises:~~ a  
custom property section comprised of one or more custom property entries, each  
custom property entry comprising information that corresponds to a respective  
custom property for the USB device.

3. (Presently amended) A method as recited in claim 1, wherein the  
~~host-defined string descriptor user interface information comprises~~ comprises:  
a custom property section comprising one or more custom property entries,  
each custom property entry corresponding to a respective custom property for the  
USB device; and  
a header section comprising an indication of the number of custom property  
entries for which mappings exist in the custom property section.

Appl. No. 09/745,385

Reply to Final OA of February 10, 2004

1  
2 4. (Presently amended) A method as recited in claim 1, wherein the  
3 host-defined string descriptor comprises user interface information is selected  
4 from information comprising an icon, a font, a picture, a label, a help page, or a  
5 URL.

6  
7 5. (Presently amended) A method as recited in claim 1, wherein the  
8 user interface information is in a data format specified by application is an  
9 operating system.

10  
11 6. (Presently amended) A method comprising  
12 querying, by a computing device coupled to a USB device, the USB device  
13 with a host-specific device request that corresponds to a descriptor for a host-  
14 defined string descriptor associated with, the descriptor indicating user interface  
15 information corresponding to stored in firmware of the USB device;  
16 responsive to the querying, receiving by the computing device, at least a  
17 portion of the user interface information; and  
18 displaying a set of user interface elements specified by the user interface  
19 information.

20  
21 7. (Presently amended) A method as recited in claim 6, wherein the  
22 host-defined string descriptor comprises: a custom property section comprised of  
23 one or more custom property entries, each custom property entry comprising  
24 information that corresponds to a respective custom property for the USB device.  
25

Appl. No. 09/745,385

Reply to Final OA of February 10, 2004

1           8.     (Presently amended) A method as recited in claim 6, wherein the  
2     host-defined string descriptor comprises:

3                 a custom property section comprising one or more custom property entries,  
4     each custom property entry corresponding to a single custom property for the USB  
5     device; and

6                 a header section comprising an indication of the number of custom  
7     properties property entries for which mappings exist in the custom property  
8     section.

9  
10           9.     (Original) A method as recited in claim 6, wherein the set of user  
11     interface elements are selected from elements comprising an icon, a font, a picture,  
12     a label, a help page, or a URL.

13  
14           10.    (Presently amended) A method as recited in claim 6, wherein the  
15     ~~user interface information~~ at least a portion of the user interface information is in a  
16     data format specified by an operating system.

17  
18           11.    (Original) One or more computer-readable media containing a  
19     computer executable program that performs a method as recited in claim 6.

20  
21  
22  
23  
24  
25

Appl. No. 09/745,385

Reply to Final OA of February 10, 2004

12. (Currently amended) In a USB device that responds to device requests from a host, the device requests including USB-specific device requests with corresponding USB-specified request codes and device-specific device requests with corresponding device-specified request codes, the USB-specific device requests including a GET\_DESCRIPTOR device request with a corresponding GET\_DESCRIPTOR request code, a method ~~of implementing a host-specific device request to display user interface elements that correspond to the USB device, the method~~ comprising:

receiving a GET\_DESCRIPTOR device request that specifies a predetermined index, the GET\_DESCRIPTOR device request having been received from an application executing on a remote computing device; and

responding to the GET\_DESCRIPTOR device request by returning a descriptor device-specific request code that corresponds in for subsequent use by the USB device to the send an extended property descriptor responsive to subsequent receipt of a host-specific device request for a device-specific request code from the remote computing device, the extended property descriptor specifying user interface information corresponding to the USB device and provided by a vendor as being in a data format compatible with the application.

13. (Original) A method as recited in claim 12, wherein the user interface information comprises:

a custom property section comprised of one or more custom property entries, each custom property entry comprising information that corresponds to a respective custom property for the USB device.

Appl. No. 09/745,385

Reply to Final OA of February 10, 2004

1           14. (Original) A method as recited in claim 12, wherein the user  
2 interface information comprises:

3           a custom property section comprising one or more custom property entries,  
4 each custom property entry corresponding to a single custom property for the USB  
5 device; and

6           a header section comprising an indication of the number of custom  
7 properties property entries for which mappings exist in the custom property  
8 section.

9  
10           15. (Original) One or more computer-readable media containing a  
11 computer executable program that performs a method as recited in claim 12.

12  
13           16. (Currently amended) A method comprising:  
14 communicating, by a component of an operating system, a non-standard  
15 USB device request to a device, the non-standard USB device request requesting  
16 an extended property from the device, the extended property providing data that is  
17 predetermined to be compatible for use by the component or the operating system,  
18 the data comprising user interface information associated with the USB device;  
19 and

20           responsive to the communicating, receiving, by the component, an extended  
21 property descriptor from the device, the extended property descriptor comprising  
22 at least the extended property specifying user interface information corresponding  
23 to the USB device.  
24  
25

Appl. No. 09/745,385

Reply to Final OA of February 10, 2004

1           17. (Currently amended) A method as recited in claim 16, wherein the  
2 method further comprises:

3           augmenting, by the operating system, user interface information comprises  
4 information that is used by an operating system to augment a shell or user  
5 interface at the remote computing device to represent the USB device.

6  
7           18. (Currently amended) A method as recited in claim 16, wherein the  
8 extended property descriptor further comprises a custom property section  
9 comprised of one or more custom property entries, each custom property entry  
10 comprising information that corresponds to a respective custom property for the  
11 USB device.

12  
13           19. (Original) A method as recited in claim 16, wherein the extended  
14 property descriptor further comprises:

15           a custom property section comprising one or more custom property entries,  
16 each custom property entry corresponding to a single custom property for the USB  
17 device; and

18           a header section comprising an indication of the number of custom  
19 properties property entries for which mappings exist in the custom property  
20 section.



Appl. No. 09/745,385

Reply to Final OA of February 10, 2004

1           20. (Currently amended) A method as recited in claim 16, wherein the  
2 extended property descriptor comprises user interface information corresponding  
3 to the USB device, the method further comprising:

4           responsive to receiving the property descriptor, providing information  
5 corresponding to the user interface information to one or more computer program  
6 applications.

7  
8           21. (Currently amended) A USB device comprising:

9           a processor;

10          a port coupled to the processor;

11          a memory coupled to the processor;

12          an extended property descriptor stored in the memory, the extended  
13 property descriptor identifying a set of user interface information corresponding to  
14 the USB device and in a data format predetermined to be compatible for use by a  
15 requesting application executing on a remote computing device; and

16          a control program module stored in the memory, the control program  
17 module being configured to send the extended configuration descriptor to a  
18 requestor in response to receiving a host-specific device request at the port.

19  
20          22. (Original) A USB device recited in claim 21, wherein the extended  
21 property descriptor comprises:

22          a custom property section comprised of one or more custom property  
23 entries, each custom property entry comprising information that corresponds to a  
24 respective custom property for the USB device.  
25

Appl. No. 09/745,385

Reply to Final OA of February 10, 2004

1           23. (Original) A USB device recited in claim 21, wherein the extended  
2 property descriptor comprises:

3           a custom property section comprising one or more custom property entries,  
4 each custom property entry corresponding to a single custom property for the USB  
5 device; and

6           a header section comprising an indication of the number of custom  
7 properties property entries for which mappings exist in the custom property  
8 section.

9  
10           24. (Currently amended) A USB device recited in claim 21, wherein the  
11 set of user interface information is in a data format specified by in anticipation of  
12 its compatible use by an operating system.

Appl. No. 09/745,385

Reply to Final OA of February 10, 2004

1           25. (Currently amended) A computer-readable storage medium  
2 containing computer-executable instructions utilized by an application program to  
3 interact with a USB device, wherein the computer-executable instructions  
4 comprise:

5           receiving a request from an application program for a descriptor that  
6 specifies user interface information in a data format predetermined to be  
7 compatible for use by the application program and corresponding to the USB  
8 device;

9           querying the USB device with a host-specific device request to obtain the  
10 property descriptor;

11           responsive to the querying, receiving the descriptor; and

12           providing the received property descriptor to the requesting application  
13 program.

14  
15           26. (Currently amended) A computer-readable storage medium as  
16 recited in claim 25, wherein the computer-executable instructions further comprise  
17 instructions for:

18           augmenting, by the application program, user interface information  
19 corresponds to information used to augment a shell or user interface with the user  
20 interface information that is presentable for presentation to a user.

Appl. No. 09/745,385

Reply to Final OA of February 10, 2004

1           27. (Original) A computer-readable storage medium as recited in claim  
2 25, wherein the obtained property descriptor comprises:

3           one or more custom property sections, each custom property section  
4 indicating information corresponding to a user interface element for the USB  
5 device.

6  
7           28. (Original) A computer-readable storage medium as recited in claim  
8 25, wherein the obtained property descriptor comprises:

9           a header section indicating the number of custom properties for which  
10 mappings exist in the property descriptor; and,

11           one or more custom property sections, each custom property section  
12 indicating information corresponding to a user interface element for the USB  
13 device.

14  
15           29. (Original) A computer-readable storage medium as recited in claim  
16 25, wherein the user interface information is selected from information comprising  
17 an icon, a font, a picture, a label, a help page, or a URL.

18  
19           30. (Original) A computer comprising one or more computer-readable  
20 media as recited in claim 25.

21  
22  
23  
24  
25

Appl. No. 09/745,385

Reply to Final OA of February 10, 2004

1           31. (Currently amended) One or more computer-readable media  
2 containing a computer-executable program for use in conjunction with a USB  
3 device that responds to device requests from the program, the device requests  
4 including USB-specific device requests with corresponding USB-specified request  
5 codes and device-specific device requests with corresponding device-specified  
6 request codes, ~~the~~ the program comprising:

7           receiving a host-specific request for an extended property descriptor from a  
8 requestor, the extended property descriptor indicating one or more user interface  
9 elements that correspond to the USB device, the one or more user interface  
10 elements being predetermined to be compatible for use by an application  
11 executing or for execution on a remote computing device; and

12           responsive to the receiving, communicating the extended property  
13 descriptor to the requestor.

14  
15           32. (Original) One or more computer-readable media as recited in claim  
16 31, wherein the property descriptor comprises:

17           a custom property section that corresponds to a user interface element  
18 associated with the USB device.

19  
20           33. (Original) One or more computer-readable media as recited in claim  
21 31, wherein the property descriptor comprises:

22           a header section indicating the number of custom properties for which  
23 mappings exist in the property descriptor; and,

24           one or more custom property sections, each custom property section  
25 corresponding to a respective user interface associated with the USB device.

Appl. No. 09/745,385

Reply to Final OA of February 10, 2004

1  
2 34. (Original) A computer comprising one or more computer-readable  
3 media as recited in claim 31.

4  
5 35 - 37. (Canceled).

6  
7 38. (New) A method as recited in claim 1, and further comprising  
8 communicating, by the USB device, the host-defined string descriptor to the  
9 application.

10  
11 39. (New) A method as recited in claim 1, wherein the host-defined  
12 string descriptor comprises information in a data format specified by a host of the  
13 USB device.

14  
15 40. (New) A method as recited in claim 1, wherein the host-defined  
16 string descriptor comprises user interface elements for presentation by the  
17 application to a user for interfacing with the USB device.

18  
19 41. (New) A method as recited in claim 1, wherein the host-defined  
20 string descriptor comprises one or more user interface elements such as an icon, a  
21 font, a picture, a label, a help page, or a URL.

22  
23 42. (New) A method as recited in claim 1, wherein the host-defined  
24 string descriptor comprises information for one or more user interface elements in  
25 a data format specified by a host of the USB device.

Appl. No. 09/745,385

Reply to Final OA of February 10, 2004

1  
2 43. (New) A method as recited in claim 1, wherein the application is an  
3 operating system.

4  
5 44. (New) A method as recited in claim 1, wherein the method further  
6 comprises communicating, by the USB device, the host-defined string descriptor  
7 to the requesting application.

8  
9 44. (New) A method as recited in claim 6, wherein the method further  
10 comprises displaying, by the computing device, a set of user interface elements  
11 specified by the at least a portion to present a user interface appropriate to the  
12 USB device to a user.

13  
14 45. (New) A method as recited in claim 12, wherein the application is an  
15 operating system.

Appl. No. 09/745,385

Reply to Final OA of February 10, 2004

1           46. (New) A computer-readable medium comprising computer-program  
2 instructions executable by a processor for:

3           communicating, by a component of an operating system, a non-standard  
4 USB device request to a device, the non-standard USB device request requesting  
5 an extended property from the device, the extended property providing data that is  
6 predetermined to be compatible for use by the component or the operating system,  
7 the data comprising user interface information associated with the USB device;  
8 and

9           responsive to the communicating, receiving, by the component, an extended  
10 property descriptor from the device, the extended property descriptor comprising  
11 at least the extended property.